TECHNICAL MANUAL

QUALITY CONTROL OF CHEMICALS

(ATOS)

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Prepared By: TRI-COR Industries. Inc.

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INTRODUCTION

1. PURPOSE.

The purpose of this technical order is to provide instructions on the quality surveillance of packaged and bulk chemicals listed in Federal Stock Classes 6810, 6820, 6840, and 6850. By maintaining a stringent quality surveillance program the shelf-life of the chemicals may be extended, saving money while insuring that the products are satisfactory for their intended use.

2. SCOPE.

This document is applicable to supply organizations that maintain inventories of these chemicals on their bases. This document has implications for all organizations that use chemicals in Air Force operations. This includes, but is not limited to, vehicle maintenance, aircraft deicing operations, corrosion shops, paint shops, cryogenic storage, fueling operations, and aircraft cleaning operations.

CHAPTER 1
GENERAL

1.1 APPLICATION.

This technical order is applicable to supply quality control functions and all organizations using chemicals at Air Force installations. Organizations will report deficiencies in accordance with T.O. 00-35D-54, USAF Materiel Deficiency Reporting and Investigating.

1.2 TYPE OF CHEMICALS.

a. FSC 6810 – ACS and Technical Grade Chemical Reagents such as alcohols, acetone, distilled water, ion exchange compounds, toluene, trichloroethylene, acids, and bases.

b. FSC 6820 – dyes.

c. FSC 6840 – insecticides, disinfectants, herbicides, deodorants, rodenticides, and insect repellants.

d. FSC 6850 – antifreeze compounds, calibrating fluid, carbon removing compounds, corrosion removing compounds, deicing fluids, penetrant inspection materials, wetting agents, and dry cleaning solvents.

1.3 PERSONNEL.

Personnel assigned to perform the tasks associated with handling, storing, and quality surveillance of packaged/bulk chemicals will be trained to develop a thorough knowledge of all chemical characteristics, hazards, and the significance of contamination. Only personnel demonstrating proficiency of the operations involved will be assigned duties and responsibilities for management of chemical products. Major Air Force Commands are responsible for ensuring that the personnel have received the proper training and documented it accordingly.

1.4 RESPONSIBILITIES.

This technical order requires the joint efforts of personnel performing in the areas of supply, maintenance, and engineering in collaboration with procurement personnel having cognizance over the contractor.

1.5 HEALTH HAZARDS, SAFETY PROCEDURES, AND FIRE PREVENTION INFORMATION.

a. The procedures and practices set forth in this publication shall be strictly adhered to. Failure to comply with these procedures and practices can result in personnel injury or loss of life. Failure to comply can also result in damage to or destruction of aircraft, equipment, and real property.

b. Warnings, cautions, and notes in this technical order are used to alert personnel of the potential hazards in handling chemicals and chemical products. For specific instructions on Health Hazards, Safety Procedures, and Fire Prevention, personnel handling chemicals and chemical products will refer to appropriate or applicable AFOSH Standard 127 Series, AFOSH Standard 161 Series, DoD 4145.19-R-1, Storage and Materials Handling, National Fire Prevention Association (NFPA) publications and Occupational Safety and Health Administration (OSHA) Standards 1910.106, 1910.132, 1910.133, 1910.1000, and 1910.1200. Supervisors are responsible for the implementation of prescribed measures in the above documents.

c. Special Handling Requirements – when necessary to transfer chemicals to other containers, care shall be exercised to assure that the receiving container is specifically suited to that material. Containers will be properly marked to indicate the chemical contents and associated hazards. Drums will be handled carefully to avoid spillage and damage. Forklift handling of drums and pallets will be carefully supervised to preclude damaging containers, protective coatings, or obliterating markings and labels. Drums will be protected from direct sunlight for prolonged periods of time, as light and heat are catalysts causing reactions in certain chemicals. Consult your Base Bio-Environmental Engineer and DET 3, WR-ALC/AFTT, Wright-Patterson AFB, OH for any needed assistance. Exposure to weather and temperature changes will be kept at a minimum. Assets in these stock classes will not be stored in temperatures exceeding (above or below) recommended storage temperatures. Leaking drums will be reported immediately to the appropriate personnel for corrective action. Good housekeeping will be practiced at all times. Spills and leaks will be promptly cleaned up and the area decontaminated. Drums, packaged chemicals, and chemical products will be stored in a neat and orderly manner at all times. Technical assistance in cleaning spills and leaks is provided by the Base Bio-Environmental Engineer and DET 3, WR-ALC/AFTT, Wright-Patterson AFB, OH. Spills and suspected contaminated drums will be reported immediately to the Base Bio-Environmental Engineer according to locally developed procedures. Each base organization is responsible to ensure proper storage facilities are

provided and maintained. Organizational personnel will be trained in handling those materials in accordance with applicable safety and environmental regulations.

d. Pollution Control – Air Force policy on pollution control establishes a requirement for USAF supply and maintenance organizations to control the issue of chemical stocks. This involves proper rotation of stocks and visual surveillance of containers to detect leakage or deterioration before pollution problems develop. If a disposal problem develops, supply or maintenance personnel shall obtain the assistance of the supporting Civil Engineer, Bio-Environmental Engineer and the Defense Reutilization and Marketing Office (DRMO) to minimize the potential for pollution. Contact DET 3, WR-ALC/AFTT, Wright-Patterson AFB, OH 45433-7632 for any additional assistance required.

NOTE

The provisions of this technical order are compatible with NATO STANAG No. 3149. Certain provisions are subject to international military standardization agreement. Changes will be made only after consideration of STANAG No. 3149 and with authority prescribed by AFI 60-101.

CHAPTER 2
PROCUREMENT AND ACCEPTANCE OF THE PRODUCT

2.1 PROCUREMENT METHODS.

Chemicals are procured locally at base level when required by AFMAN 23-110 or centrally at Defense Logistics Agency (DLA) or General Services Administration (GSA) installations. Certain inspection and acceptance tests are required at base or depot level. Government Quality Assurance (QAR) personnel will accomplish inspection and acceptance functions at the contractor's facilities. For the purpose of this technical order packaged chemicals are in unit containers of 55 gallons or less for liquid chemicals and 300 pounds or less for solid chemicals. Larger unit containers are considered as bulk chemicals.

2.2 CENTRAL PROCUREMENT OF PACKAGED CHEMICALS.

a. Most contracts of centrally procured chemicals are written with inspection and acceptance points designated at the contractor's F.O.B. point.

b. When inspection and/or acceptance is designated at destination, as noted on the DD Form 250, responsibility lies with the Base Supply Inspector. For chemicals not procured per a specification, it is sufficient to inspect for identification, content, packaging, and damage.

2.3 PROCUREMENT OF BULK CHEMICALS.

Transport container contents of bulk chemicals will be sampled per Paragraph 4.5 through Paragraph 4.7 and tested per Paragraph 5.2. The QAR shall be notified when evidence of possible contamination exists and requested to take immediate corrective action.

2.4 STORAGE OF CHEMICALS.

a. Chemicals will be stored in accordance with DoD 4145.19-R-1.

b. Containers, drums, and associated tanks, lines, and equipment will be inspected monthly for leaks. If a leak is observed and cannot be repaired, the chemical will be transferred to another clean container that is suitable for the product. Maintain an adequate supply of overpack containers for this purpose. Repacking container must be plainly marked with all identification required on the original containers. The only repairs that normally can be accomplished on leaking drums are the tightening of the bung plug or the replacement of the gasket. A check list for these inspections should be maintained for one (1) year in accordance with AFMAN 23-110, Volume 2, Part 2, Chapter 14, Paragraph 14.33.7 and AFMAN 23-110, Volume 7, Part 3, Chapter 1, Paragraph 1.4.4.

2.5 STOCK ROTATION.

All stocks of chemicals and chemical products including War Reserve Material (WRM) shall be rotated to insure that the oldest material is issued and used first. (AFMAN 23-110, Volume 7, Part 3, Chapter 1, Paragraph 1.4.1.2.)

2.6 SHELF-LIFE CODES/RETEST PERIODS.

The Air Force is exempt from the shelf-life codes for FSG 68 items in the management data listing and on the item containers (see AFMAN 23-110, Volume 7, Part 3, Chapter 1, Paragraph 1.4.3). This publication provides the authorized retest period for items in FSG 68, and requires periodic testing to assure continued usability. Disregard all shelf-life codes and instructions when they conflict with this publication. No chemical or chemical product will be condemned or disposed of because of shelf-life codes or data in supply system documents.

2.7 DEFECTIVE MATERIAL.

Surveillance of chemical materials presents numerous problems for quality control inspectors. Defective chemicals are difficult to detect by visual inspection. Laboratory analysis or inspection by a chemist is often required to determine the serviceability of a chemical. The procedures specified here are to aid quality control inspectors in maintaining effective surveillance over chemical products. This publication specifies chemicals that require laboratory testing to be updated. Materials not meeting test requirements will be disposed of in accordance with AFMAN 23-110, Volume 2, Part 2, Chapter 14, Paragraph 14.33.9.5 and appropriate local directives.

2.8 CHEMICAL CONTAINER MARKINGS.

a. Inspections will be made by supply and using Air Force activities to see that all markings are intact and present whenever chemicals are received, stored, issued, or transferred so that the danger of using the improper chemical is avoided. Current retest dates will be marked on the appropriate chemical container.

b. Drum markings will be in accordance with MIL-STD-129, MARKING FOR SHIPMENT AND STORAGE.

c. All organizations shall insure that chemical containers (drums, pails, cans, etc.) are not repainted to the extent that essential supply identification data is obliterated. The indiscriminate painting over of supply identification data necessitates expensive laboratory testing to reestablish a product's identity and quality. If a supply data area requires repainting or the chemical product is being transferred to another suitable container, then all supply data/labels/markings will be transferred and properly attached. Complete identification data will always be marked on the containers during repainting to insure that no data is misplaced or destroyed.

CHAPTER 3
QUALITY INSPECTION OF PACKAGED AND BULK CHEMICALS

3.1 RESPONSIBILITIES.

The Supply QA Inspection Office will maintain surveillance over both packaged and bulk chemicals.

3.2 CHEMICAL CHARACTERISTICS.

a. Chemical products vary in their shelf-life stability; however, most quality problems involving deterioration of chemicals result from storing materials for an excessive period of time under adverse storage conditions and improper rotation of stock.

b. Proper packaging, storage, use, and stock rotation (in which the oldest material is issued first), will minimize losses due to deterioration.

c. Proper issuing and requisitioning practices will be used to provide a timely turnover in stock, including War Reserve Materials (WRM).

3.3 VISUAL INSPECTION.

All chemicals and chemical products, both packaged and bulk, in FSC 6810, 6820, 6840, and 6850 classes will be visually inspected. Visual inspection by a supply inspector will be made for broken or leaking packages, and closures indicative of deterioration of material. Products exhibiting known visual defects will be identified, segregated, and held under a supply condition code J. DET 3, WR-ALC/AFTT, Wright-Patterson AFB, OH, DSN 785-8050, should then be contacted for disposition instructions on these defective products. If AFTT recommends retesting, the product should be sampled and submitted for testing in accordance with Paragraph 4.8 through Paragraph 4.10 and Chapter 5 to determine product quality prior to issue. In the event, the date of manufacture is not shown on the container, the date of receipt from the contractor, DLA, or GSA will be used as the approximate date of manufacture for retesting purposes. Frequently, proper material marking is shown only on the outside carton, but not on the individual containers. Once the carton is opened, individual containers will be inspected for proper markings and marked in accordance with MIL-STD-129. The following identification shall be on each container:

a. National Stock Number (NSN)

b. Specification Number, as Applicable

c. Chemical Nomenclature

d. Manufacturer's Name and Federal Supply Code Number (FSCM)

e. Container Size and Weight/Volume of Contents

f. Batch/Lot Number

g. Date of Manufacture

h. Reinspection Date

i. DOT marking requirements

The supply inspector will use non-removable ink to transfer all required identification from the labeling on the carton to the containers.

3.4 SPECIFICATION VERSUS COMMERCIAL/PROPRIETARY CHEMICALS.

a. Commercial/Proprietary Chemicals – most manufacturing companies will not provide the chemical make-up of these items. Since the chemical formulations can be changed at the will of the manufacturer, these products are not normally tested, see Paragraph 5.2. The products are suitable for use unless a visual inspection indicates product and/or container deterioration. In this case, DET 3, WR-ALC/AFTT, DSN 785-8050, should be contacted for disposition instructions.

b. Specification Chemicals – the chemical compositions and specific physical properties are known for these chemical items. Tests will be performed to monitor their quality while they are in the Air Force supply system in accordance with Paragraph 5.2.

CHAPTER 4
SAMPLING FOR TESTING

4.1 GENERAL.

Chemicals shall be sampled and tested in accordance with test requirements and time intervals as specified in Chapter 5 of this publication.

4.2 SAMPLING.

Proper sampling is required to obtain a representative portion of a larger quantity. It is the most important operation in the analysis of a chemical or chemical product.

NOTE

Extreme care should be exercised to ensure that a representative sample is obtained. An accurate analysis will be invalidated by poor sampling.

4.3 SAMPLING PRECAUTIONS FOR BULK AND PACKAGED PRODUCTS.

a. Request any needed assistance from your Base Bio-Environmental Engineer.

b. Use proper safety equipment.

c. Assure hands or gloves are clean.

d. Assure sampling equipment and sampling containers are clean.

e. Assure that the correct sampling equipment is being used.

f. Assure that the product in the container to be sampled is properly mixed.

g. Assure that the sample or storage containers are not contaminated.

h. Assure that the sample container is properly labeled.

4.4 SAMPLING PLANS AND SIZES FOR PACKAGED AND BULK CHEMICALS.

a. Packaged chemicals in containers of less than 5 gallons or 5 pounds.

(1) Sample Plan: Randomly select unopened container(s) from the batch/lot. Send the sample to the appropriate laboratory for testing.

(2) Sample Size: The lowest number of containers shall be selected which provides a sample size of at least 1 gallon or 1 pound in total quantity. (Example: If the container sizes are ¼ pound boxes, then four ¼ pound boxes would be required for the sample. If the container sizes are 4-gallon bottles, then one 4-gallon bottle would be submitted.) Note that exceptions to this are listed in Step d below.

b. Packaged chemicals in containers of 5 gallons or 5 pounds or larger.

(1) Sample Plan: Randomly select 1 unopened container from the batch/lot. Send the sample to the appropriate laboratory for testing.

(2) A 1 gallon or 1 pound representative sample shall be taken from the unopened container.

c. Bulk chemicals (Paragraph 2.1).

(1) Sample Plan: Select sample as delineated in Paragraph 4.5 through Paragraph 4.7. Send the sample to the appropriate laboratory for testing.

(2) A 1 gallon or 1 pound representative sample shall be taken from the bulk container.

d. Following is a list of excepted product and the recommended sample size:

Fuel System Icing Inhibitor	MIL-DTL-85470	1 qt
Fuel System Icing Inhibitor	MIL-DTL-27686	1 qt
Decontaminating Agent, STB	MIL-DTL-12468	2 oz
Leak Detection Compound	MIL-PRF-25567	1 qt
Antifreeze	MIL-A-46153	1 qt
Denatured Alcohol	O-E-760	1 qt
Molybdenum Disulfide	AMS-M-7866	2 oz
Deicing Fluid	MIL-A-8243	1 qt

4.5 SAMPLING METHODS FOR BULK LIQUID CHEMICALS.

a. Apparatus

1. Acid Pump, Siphon Type (NSN 4320-01-182-6931)

2. Pump, Stainless Steel Drum (NSN 4320-01-184-4284)

3. Drum Thief, Stainless Steel (NSN 6695-01-168-4384)

WARNING

Required personal protective equipment and approved procedures must be utilized for all sampling operations. Inhalation of the vapor or skin contact with the chemical can cause serious injury or loss of life.

b. Procedure – do not fill sample bottles over 90% full.

(1) Select at random a representative chemical container from the lot.

(2) Ensure that the sampling equipment and sample bottle or can is not contaminated.

(3) Sample the liquid chemical using either a drum thief or a pump/siphon.

(a) Purge about 1 pint to 1 quart of the fluid into a suitable container and dispose of in accordance with local base regulations.

(b) Place clean sampling bottle over the nozzle of pump/siphon and start the flow of the fluid.

(c) Fill the bottle 1/8 to 1/4 full.

(d) Stop flow and swirl fluid in bottle.

(e) Discard this fluid along with initial purge in accordance with local regulations.

(f) Place bottle over nozzle and again start the flow of fluid.

(g) After the desired volume has been obtained, stop the flow, remove the pump, cover the container, and cap sample bottle.

(h) Clean sampling equipment and outside of sample bottle with water. Discard rinse solution in accordance with local regulations.

(i) Identify sample bottle (see Paragraph 4.8).

4.6 SAMPLING METHODS FOR BULK LIQUID CHEMICAL TANKS.

This method covers a general procedure for obtaining fluid from a static system (above and below ground tank storage).

WARNING

Required personal protective equipment and approved procedures must be utilized for all sampling operations. Inhalation of the vapor or skin contact with the chemical may cause serious injury or loss of life.

a. Mix the chemical in the tank by recirculating until a truly representative sample can be taken. A poorly mixed tank will not provide a true sample and test results from such a sample will be wrong. If the chemical cannot be mixed completely, contact AFTT for additional instructions before sampling.

b. Remove cover from sample valve.

c. Flush sampling tube or pump into a suitable container until fresh chemical is obtained. Usually it is sufficient to drain off a quantity of chemical equivalent to the volume of the sampling line. Dispose of flushed material in accordance with local base procedures.

d. Add a small amount of the chemical to sampling bottle, swirl gently, then discard with the previously flushed chemical in accordance with local base procedures.

e. Immediately fill and cap the sample bottle.

f. Turn off and cover the sample valve.

g. Wash sample valve and bottle with water. Collect washing in a suitable waste container and dispose of in accordance with local base procedures.

h. Identify sample bottle (see Paragraph 4.8).

4.7 SAMPLING METHODS FOR SOLID CHEMICALS.

This method covers a general procedure for sampling solid chemicals from a static system. Sampling equipment used in solid chemical sampling must be clean, dry, and inert to the material being tested.

a. Apparatus.

1. Scoop, Cast Aluminum (Fisher Scientific, P/N 14-241B or equivalent)

2. Thief Tube, Concentric (Fisher Scientific, P/N 03-338-2A or equivalent)

3. Shovel, Stainless Steel

4. Shovel, Polyethylene, White (Fisher Scientific, P/N 17-932-1A)

5. Shovel, Polyethylene, Green (Fisher Scientific, P/N 17-932-A)

b. Procedure.

WARNING

Required personal protective equipment and approved procedures must be utilized for all sampling operations. Inhalation of the vapor or skin contact may cause serious injury or loss of life.

(1) Remove cover from the container (1 container from the lot).

(2) Using hand scoop, concentric thief tube, or shovel, take a representative sample from solid container.

(3) Place sample in a clean, dry sample container to desired capacity.

(4) Cover both containers.

(5) Clean sampling equipment thoroughly.

(6) Identify sample container (see Paragraph 4.8).

4.8 CHEMICAL SAMPLE IDENTIFICATION.

Samples should be sent to the nearest laboratory (see Paragraph 4.10). Samples submitted for reasons other than update retesting shall include a letter explaining the circumstances in detail. Each sample submitted shall be identified by using an AFTO Form 475 tag or equivalent. Include the following information:

a. National Stock Number (NSN)

b. Chemical Name

c. Specification

d. Contract

e. Supplier

f. Batch/Lot

g. Date of Manufacture

h. Date of Sampling

i. Sample Identification Number

j. Quantity on Hand

k. The Sample, per T.O. 42C-1-12

l. Name, Location, DSN, and Commercial Phone Number of Submitting Activity

NOTE

A sample of product having undergone repackaging and/or relabeling (Paragraph 2.4, Step b and/or Paragraph 2.8, Step c) shall be stated on the AFTO 475 tag.

4.9 SHIPPING SAMPLES.

To ensure timely sample arrival, the required shipping forms should be coordinated through the Traffic Management Office (TMO). Include the appropriate priority and Required Delivery Date (RDD) for shipment. As a minimum, an Issue Priority Designator (IPD) 03/Transportation Priority (TP) 1 is authorized for shipments to the Aerospace Fuels Laboratories.

4.10 CHEMICAL TESTING LABORATORIES.

Samples will be sent to the indicated laboratory according to origin of sample, except as noted in Table 5-1 or as otherwise directed by DET 3, WR-ALC/AFTT. Other Department of Defense Laboratories may be used when approved in writing by DET 3, WR-ALC/AFTT, 2430 C Street, Bldg 70, Area B, Wright-Patterson AFB, OH 45433-7632 prior to actual testing.

a. Laboratories for Testing Samples Originating in CONUS.

(1) AFTLA, Wright-Patterson AFB shipping and mailing addresses:

Aerospace Fuels Laboratory (FP2070)
OL DET 3, WR-ALC/AFTLA
2430 C Street, Bldg 70, Area B
Wright-Patterson AFB, OH 45433-7632

Mail Address:

Aerospace Fuels Laboratory
OL DET 3, WR-ALC/AFTLA
2430 C Street, Bldg 70, Area B
Wright-Patterson AFB, OH 45433-7632

Telephone Numbers:

Commercial: (937) 255-2106
DSN: 785-2106

NOTE

Due to laboratory consolidation, AFTLB will be closing 1 May 2005. After 1 May 2005 all AFTLB (Searsport, ME) samples should be redirected to AFTLA (Wright-Patterson AFB, OH).

(2) AFTLB, Searsport, Maine Laboratory shipping and mailing addresses:

Aerospace Fuels Laboratory (FP2071)
OL DET 3, WR-ALC/AFTLB
Trundy Road, Bldg 14
Searsport, ME 04974

Mail Address:

Aerospace Fuels Laboratory
OL DET 3, WR-ALC/AFTLB
P.O. Box 408
Searsport, ME 04974-0408

Telephone Number:

Commercial: (207) 548-2451
(No DSN)

b. Laboratory for Testing Samples Originating in PACAF.

AFTLG, Kadena AB Aerospace Fuels Laboratory shipping and mailing addresses:

Aerospace Fuels Laboratory (FP2083)
OL DET 3, WR-ALC/AFTLG
Bldg 854
Kadena Air Base, Okinawa JA
APO AP 96368-5162

Mail Address:

Aerospace Fuels Laboratory
OL DET 3, WR-ALC/AFTLG
Unit 5161
APO AP 96368-5161

Telephone Number:

DSN: (315) 634-3394/1602

c. Laboratory for Testing Samples Originating in USAFE.

AFTLF, RAF Mildenhall UK, Aerospace Fuels Laboratory shipping and mailing addresses:

Aerospace Fuels Laboratory (FP2080)
OL DET 3, WR-ALC/AFTLF
Unit 5025
RAF Mildenhall UK, Bldg 725
APO AE 09459

Mail Address:

Aerospace Fuels Laboratory
OL DET 3, WR-ALC/AFTLF
Unit 5025
APO AE 09459-5025

Telephone Numbers:

Commercial: 44-1-638-54-2043
DSN: (314) 238-2043/2797

CHAPTER 5
TESTING REQUIREMENTS

5.1 GENERAL.

This chapter presents testing requirements for FSC 6810, 6820, 6840, 6850 chemicals.

5.2 RETESTING AND INSPECTION REQUIREMENTS FOR CHEMICALS.

Chemicals whether bulk or packaged will be tested and/or inspected as follows:

a. All chemicals will be visually inspected upon receipt (see Paragraph 3.3).

b. Commercial/proprietary chemicals will be visually inspected 24 months from the date of manufacture, per Paragraph 3.3, and every 24 months thereafter. Specification chemicals, except those listed in Table 5-1, will be visually inspected 24 months from date of manufacture and every 24 months thereafter. DET 3, WR-ALC/AFTT should be contacted for disposition instructions on any product failing a 24-month visual inspection.

Table 5-1 lists those chemicals requiring retesting for shelf-life updating. Samples are not to be submitted for testing without authorization from DET 3, WR-ALC/AFTT. Contact DET 3, WR-ALC/AFTT by phone, letter, or message for instructions or new retest updates if available.

Table 5-1. Laboratory Designations

Chemical Nomenclature	Specification	FSC	Testing Laboratory[1]
Chemicals Requiring Testing Every 12 Months			
Fuel System Icing Inhibitor	MIL-DTL-27686	6850	A
Fuel System Icing Inhibitor	MIL-DTL-85470	6850	A, B, F, G
Deicing Fluid, Aircraft	AMS 1424[2]	6850	A, G
Deicing/Anti-icing Fluid, Aircraft	AMS 1428[2]	6850	A
Corrosion Removing Compound	AMS 1640[3]	6850	A
Chemicals Requiring Retesting Every 24 Months			
Calcium Hypochlorite	ASTM E-1229	6810/6840	A
Methanol	O-M-232	6810	A
Corrosion Removing Compound	MIL-C-38334	6850	A
Leak Detection Compound	MIL-PRF-25567	6850	A, B
Sea Marker Packet Dye	MIL-S-17980	6850	A
Cleaning Compound, Oxygen Systems	A-A-50425	6850	A
Cleaning Compound, Oxygen Systems	A-A-50427	6850	A
Cleaning Compound, Solvent Mixture	A-A-59281[3]	6850	A
Chemicals Requiring Retesting Every 36 Months			
Denatured Alcohol	O-E-760	6810	A, B
Ethyl Alcohol, ACS	A-A-59282[4]	6810	A, B
Ethyl Alcohol, USP Dehydrated	A-A-51693[3]	6810	A, B
Denatured Alcohol	27 CFR 21.35[3]	6810	A, B
Denatured Alcohol	27 CFR 20.112[3]	6810	A, B
Denatured Alcohol	27 CFR 20.113[3]	6810	A, B
Ether, Petroleum	O-E-751	6810	A, B
Molybdenum Disulfide	AMS-M-7866	6810	A

Table 5-1. Laboratory Designations - Continued

Chemical Nomenclature	Specification	FSC	Testing Laboratory[1]
Antifreeze	A-A-52624[3]	6850	A, B, G
Calibrating Fluid	MIL-PRF-7024	6850	A, B
Cleaning Compound, Aircraft Surface	MIL-C-43616	6850	A
Cleaning Compound	MIL-C-81302	6850	A
Cleaning Compound, Aircraft Surface	MIL-PRF-85570	6850	A
Cleaning Compound, Aircraft Surface	MIL-PRF-87937	6850	A
Corrosive Prevention Compound	MIL-C-6529	6850	A
Corrosive Prevention Compound	MIL-PRF-8188	6850	A
Silicone Compound	AS 8660	6850	A
Chemicals Requiring Retesting Every 48 Months			
Compass Fluid, Aircraft	MIL-L-5020	6810	A, B
Isopropanol	TT-I-735	6810	A, B
Corrosive Prevention Compound	MIL-C-4339	6850	A
Decontaminating Agent, STB	MIL-DTL-12468	6850	A
Deicing/Anti-icing Fluid, Runway	AMS 1435	6850	A, F, G
Deicing Fluid	MIL-A-8243[5]	6850	A, B
Chemicals Requiring Disposal After 12 Months			
Hydrogen Peroxide	A-A-59282[4]	6810	
Methyl Ethyl Ketone Peroxide	A-A-59304[3]	6810	
Sodium Peroxide	A-A-59282[4]	6810	

[1]Testing Laboratories designated as A, B, F, and/or G indicate AFTLA, AFTLB, AFTLF, and/or AFTLG respectively as described in Paragraph 4.10.

[2]AMS Aircraft Deicing and Anti-icing Fluids: Bulk products shall be tested annually prior to the winter season. Packaged products, such as 55-gal drums, have an initial 24-month shelf-life from date of manufacture. Retested products may be updated each 12 months thereafter.

[3]Corrosion Removing Compound, AMS 1640, supersedes MIL-C-38334. Cleaning compound, solvent mixture, A-A-59281, supersedes MIL-C-38736. Methyl Ethyl Ketone Peroxide, A-A-59304, supersedes MIL-P-87938. Anti-freeze, Multi-engine type, A-A-52624, supersedes MIL-A-46153. Alcohol, Dehydrated, USP, A-A-51693, supersedes O-E-760, Type II, Grade A. Alcohol, USP, A-A-53880, supersedes O-E-760, Type II, Grade B. 27 CFR 21.35, supersedes O-E-760, Type III, Grades A and B. 27 CFR 20.113, supersedes O-E-760, Type IV. 27 CFR 112, supersedes O-E-760, Type V. Cleaning Compound, Aircraft Surface, MIL-PRF-87937 supersedes MIL-C-87936

[4]A-A-59282 (superseding O-C-265) is a general specification for many different analytical reagent grade chemicals. Most of these chemicals require visual inspection. Ethyl Alcohol, ACS, requires testing every 36 months as noted in Table 5-1. Hydrogen peroxide and sodium peroxide require disposal after 12 months.

[5]Although Deicing Fluid, MIL-A-8243 specification has been canceled, it has been included in this table due to the quanity being stored as War Reserve Material (WRM).

5.3 EXCESS CHEMICALS.

Chemicals and chemical products, whether packaged or in bulk, will be considered excess if not used within 24 months of receipt and no requirement is foreseen within the next 12 months, (except War Reserve Materials). See Paragraph 5.4 for disposal instructions for excess chemicals.

5.4 DISPOSITION OF OVERAGED OR EXCESS CHEMICALS.

If chemicals are determined to be excess (see Paragraph 5.3), they will be turned in to DRMO in acceptable containers for proper disposal. The Base Bio-Environmental Engineer can assist in turning in hazardous, unserviceable chemicals to DRMO.

5.5 CHEMICAL TESTING REQUIREMENTS.

All quality conformance physical and chemical tests as required by DET 3, WR-ALC/AFTT and in accordance with the specification will be performed on each chemical by the laboratory to update the product and ascertain that it meets specification requirements.

5.6 CHEMICAL TEST REPORTS.

The applicable testing laboratory (Paragraph 4.10) will prepare a laboratory report for each chemical sample tested. The laboratory will retain 1 copy and will forward copies to the submitting activity, DSCR-JDTA, DET 3, WR-ALC/AFTT and DET 3, WR-ALC/AFTL.

5.7 RETEST DATA.

Retest data is available from Detachment 3, Warner Robins ALC/AFTT. All Air Force activities will check with AFTT before sending a sample to a laboratory for testing in order to preclude unnecessary testing. Testing can be requested at any time when the base suspects that a chemical does not meet specification requirements. The retest database is available on the internet at https://afpet.wpafb.af.mil. Retest requests shall include the following:

a. National Stock Number (NSN)

b. Chemical Name

c. Specification

d. Batch/Lot

e. Contract

f. Date of Manufacture

g. Quantity on Hand

h. Manufacturer

Correct address and phone number for DET 3, WR-ALC/AFTT is as follows:

DET 3, WR-ALC/AFTT
2430 C St, Bldg 70, Area B
Wright-Patterson AFB, OH 45433-7632
DSN: 785-8050
(937) 255-8050